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**From:** Craig, Harry [Craig.Harry@epa.gov]  
**Sent:** 6/12/2015 4:23:31 PM  
**To:** Shuster, Kenneth [Shuster.Kenneth@epa.gov]; Galbraith, Michael [Galbraith.Michael@epa.gov]; Lesser, Ben [Lesser.Ben@epa.gov]; Gaines, Jeff [Gaines.Jeff@epa.gov]; Lipka, Michelle [Lipka.Michelle@epa.gov]  
**CC:** Sasseville, Sonya [Sasseville.Sonya@epa.gov]; Wilson, Michaelle [Wilson.Michaelle@epa.gov]; Maddox, Doug [Maddox.Doug@epa.gov]  
**Subject:** RE: Subp X WG Conf Call  
**Attachments:** WaterJet-Cutting-Munitions-eder-miremar.pdf; HighPressureWaterJet-OrdnanceDemil.pdf; HighPressureWaterJet-Demil-Borkowski-Poland-2008.pdf

Ken,

Is there any discussion in these reports about potential soil and groundwater contamination from OB and OD? Compounds like RDX, HMX, and perchlorate are extremely mobile, and can end up in groundwater fairly easily, particularly in high infiltration environments (higher rainfall) and shallow groundwater tables, like VA.

One of the technologies that does not seem to be well covered is high pressure water jet cutting, such as cutting off fuzes, sectioning cased munitions including the explosive and propellant fillers into smaller sections, etc. Here are a couple of background papers on high pressure water jet cutting, and an excellent review of the Gradient Technology work in the following link:

[http://www.dtic.mil/ndia/2013IMEM/W16298\\_schmit.pdf](http://www.dtic.mil/ndia/2013IMEM/W16298_schmit.pdf)

Regards,

Harry

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**From:** Shuster, Kenneth  
**Sent:** Thursday, June 11, 2015 12:01 PM  
**To:** Galbraith, Michael; Lesser, Ben; Gaines, Jeff; Lipka, Michelle  
**Cc:** Craig, Harry; Sasseville, Sonya; Wilson, Michaelle  
**Subject:** FW: Subp X WG Conf Call

FYI: VA DEQ in today's Subp X WG conf call suggested that we at HQ gather all we can on alternative technologies to OB/OD and make this info available to the other regions and states. I told them that this is an excellent idea, that I have already started to collect this info, and for any of the states and regions that have such info to send it to me.

VA DEQ has 3 OB/OD permit renewal facilities and has asked them as part of this process to do just such an assessment (a suggestion I made on a Subp X WG conf call about 6 months ago). The attached reports are the responses they got from the Navy and NASA. They are still waiting a response from Radford AAP (Army).

Ken Shuster  
703-308-8759

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**From:** Scott, Ashby (DEQ) [mailto:Ashby.Scott@deq.virginia.gov]  
**Sent:** Thursday, June 11, 2015 2:03 PM  
**To:** Shuster, Kenneth  
**Cc:** [leslie.romanchik@deq.virginia.gov](mailto:leslie.romanchik@deq.virginia.gov)  
**Subject:** RE: Subp X WG Conf Call

Ken,

Attached are the alternative treatment technology reviews from the two OB/OD permitted facilities, US Navy Dahlgren and NASA Wallops Island, who have submitted their renewal applications so far. Please let me know if you require anything else.

Thanks,  
Ashby

Ashby R. Scott  
Hazardous Waste Permit Writer  
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**From:** Shuster, Kenneth [<mailto:Shuster.Kenneth@epa.gov>]

**Sent:** Thursday, June 11, 2015 11:36 AM

**To:** Galbraith, Michael; Lesser, Ben; Lipka, Michelle; Gaines, Jeff; King, Toshia; Abdul-Malik, Norma; Gerhard, Sasha; Svizzero, Michael; Hansen, Gail; Kohler, Amanda; Colon, Lilybeth; Yee, Stephen; Everett, Adolph; Azzam, Nidal; Park, Andy; Brogard, John; Ferreira, Gina; Salgado, Angel; Negron, Luis; Matyskiela, Linda; Kinslow, Sara; Housley, Denise; Crosby-Vega, Terri; McKeePerez, Nancy; Zapata, Cesar; Gilliland, Houston; Watson, Sarah; Blough, James; Ramanauskas, Peter; Lee, Jae; Hendrickson, Charles; Fruitwala, Kishor; Herstowski, Ken; Brown, Terry; Newland, Jesse; Morlock, Nancy; Zabaneh, Mahfouz; Gross, Barbara; Meyer, Linda; Palumbo, Janice; [John.Scott@dep.state.nj.us](mailto:John.Scott@dep.state.nj.us); [Zafar.Billah@dep.state.nj.us](mailto:Zafar.Billah@dep.state.nj.us); [Jennifer.Meyer@dep.state.nj.us](mailto:Jennifer.Meyer@dep.state.nj.us); [Thomas.Giordano\\_dep.nj.gov](mailto:Thomas.Giordano_dep.nj.gov); [Anthony.Fontana@dep.nj.gov](mailto:Anthony.Fontana@dep.nj.gov); [michelle.ching@dec.ny.gov](mailto:michelle.ching@dec.ny.gov); [tjkillie\\_gw.dec.state.ny.us](mailto:tjkillie_gw.dec.state.ny.us); Diane McDaniel; Oscar Vazquez-Martinez; Linda Houseal; [vutran\\_pa.gov](mailto:vutran_pa.gov); [Ed.Hammerberg@maryland.gov](mailto:Ed.Hammerberg@maryland.gov); [Albert.Simkins@maryland.gov](mailto:Albert.Simkins@maryland.gov); Romanchik, Leslie (DEQ); Scott, Ashby (DEQ); McAvoy, Russell (DEQ); [Chad.Stevens@dep.state.fl.us](mailto:Chad.Stevens@dep.state.fl.us); [Albert.Frakes\\_tn.gov](mailto:Albert.Frakes_tn.gov); [Jamie.Burroughs\\_tn.gov](mailto:Jamie.Burroughs_tn.gov); [April.Webb@ky.gov](mailto:April.Webb@ky.gov); [heather.alexander\\_ky.gov](mailto:heather.alexander_ky.gov); [Colette.Easter@ky.gov](mailto:Colette.Easter@ky.gov); [Dale.Burton@ky.gov](mailto:Dale.Burton@ky.gov); [George.Partridge@ky.gov](mailto:George.Partridge@ky.gov); [Daniel.Walker@ky.gov](mailto:Daniel.Walker@ky.gov); [PBANSCH@idem.IN.gov](mailto:PBANSCH@idem.IN.gov); [rich.nussbaum@dnr.mo.gov](mailto:rich.nussbaum@dnr.mo.gov); [bill.fanska\\_dnr.mo.gov](mailto:bill.fanska_dnr.mo.gov); [Jalal.el-jayyousi@dnr.mo.gov](mailto:Jalal.el-jayyousi@dnr.mo.gov); Don Caffery; [lina.saale@la.gov](mailto:lina.saale@la.gov); [Donald.Hensch@deq.ok.gov](mailto:Donald.Hensch@deq.ok.gov); [Rachel.Hanigan@deq.ok.gov](mailto:Rachel.Hanigan@deq.ok.gov); [timothy.hall\\_state.nm.us](mailto:timothy.hall_state.nm.us); [Siona.Briley@state.nm.us](mailto:Siona.Briley@state.nm.us); [david.strasser@state.nm.us](mailto:david.strasser@state.nm.us); [Siew.Kour@nebraska.gov](mailto:Siew.Kour@nebraska.gov); Richard Flanary; [deb.anderson@state.co.us](mailto:deb.anderson@state.co.us); [kevin.christensen@state.sd.us](mailto:kevin.christensen@state.sd.us); [cerickso@nd.gov](mailto:cerickso@nd.gov); [Alan.Thompson@wyo.gov](mailto:Alan.Thompson@wyo.gov); [Jerry.Breed@wyo.gov](mailto:Jerry.Breed@wyo.gov); Lily Barkau Lee; [Edward.Nieto\\_dtsc.ca.gov](mailto:Edward.Nieto_dtsc.ca.gov); [Sam.Coe@dtsc.ca.gov](mailto:Sam.Coe@dtsc.ca.gov); Elly Daoud; [Antonia.Becker@dtsc.ca.gov](mailto:Antonia.Becker@dtsc.ca.gov); [Deming.Diana@azdeq.gov](mailto:Deming.Diana@azdeq.gov); [Sachs.Maria@azdeq.gov](mailto:Sachs.Maria@azdeq.gov); [Leverock.Anthony@azdeq.gov](mailto:Leverock.Anthony@azdeq.gov); Torres, Ramon; [Edward.Malone@ky.gov](mailto:Edward.Malone@ky.gov); [Todd.Powers@ky.gov](mailto:Todd.Powers@ky.gov)

**Subject:** RE: Subp X WG Conf Call

The next Subp X WG Conference Call is today 6/11/15, 12n-1:30pm EST.

Dial-In Number:  
Conference Code:

**Conference Line/Code / Ex. 6**

FYI: Attached is an updated (as of today) list of Subp X WG members, including those wanting to be on the distribution list.

Here is the Final Agenda:

- 1) HQ Update {Ken Shuster}
  - ✓ HQ Summer intern Michelle Lipka: OB/OD contamination; cleanup costs
  - ✓ ORCR OD waste explosives briefing 6/19

√ NBSCAB letters to Congress May 17, 2015

√ Camp Minden, LA

√ Next ICE meeting 7/15

- 2) Leslie Romanchik and I just had a discussion with Mr. David Ordway at General Atomics about their Super Critical Water Oxidation system which has been designed to treat energetic wastes among other waste streams. I'd like to see if any of the other states have evaluated this or similar treatment technologies when performing the alternative treatment technology review for OB/OD permits and if this technology looked promising. Attached is the short presentation Mr. Ordway provided to us which explains the system and what waste streams it can treat. [Ashby Scott, Hazardous Waste Permit Writer, Department of Environmental Quality, 629 East Main Street, Richmond, VA 23218 Phone: 804-698-4467 [Ashby.Scott@deq.virginia.gov](mailto:Ashby.Scott@deq.virginia.gov)]
- 3) During the course of the permit application review a database of emission factors for OB/OD operations, which DoD has been developing in conjunction with EPA, was referenced in the risk assessment protocol. When I questioned the facility regarding the source of the emission factors and whether they would be willing to provide a copy of the database the facility contact replied that they are currently QA/QC'ing the database with Mr. Mike Ciolek of EPA's Office of Air Quality Planning and Standards in the Research Triangle Park office in NC and that the emission factors were planning on being included in EPA's new WebFIRE emissions factor system. The facility also forwarded the contact information for Dr. Randall Cramer, who is the point of contact for them regarding the DoD emission factor database. I believe the Subp X WG may be interested to hear about the existence of the database since this will eventually feed into the risk assessment modeling for any permit renewals of the OB/OD units and if possible have Dr. Cramer on the call to discuss the database and how DoD developed the emission factors. Dr. Cramer's contact information is: Dr. Randall J Cramer, 4234 Steves Way-Suite 121, Indian Head, MD 20640-5058, phone: 301.744.5641, cell: 703.568.0560 [Ashby Scott, VA DEQ]

NOTE: No Subp X call in July; the next one will be Thurs, Aug 6...please plan to attend. Thanks.

Ken Shuster  
703-308-8759